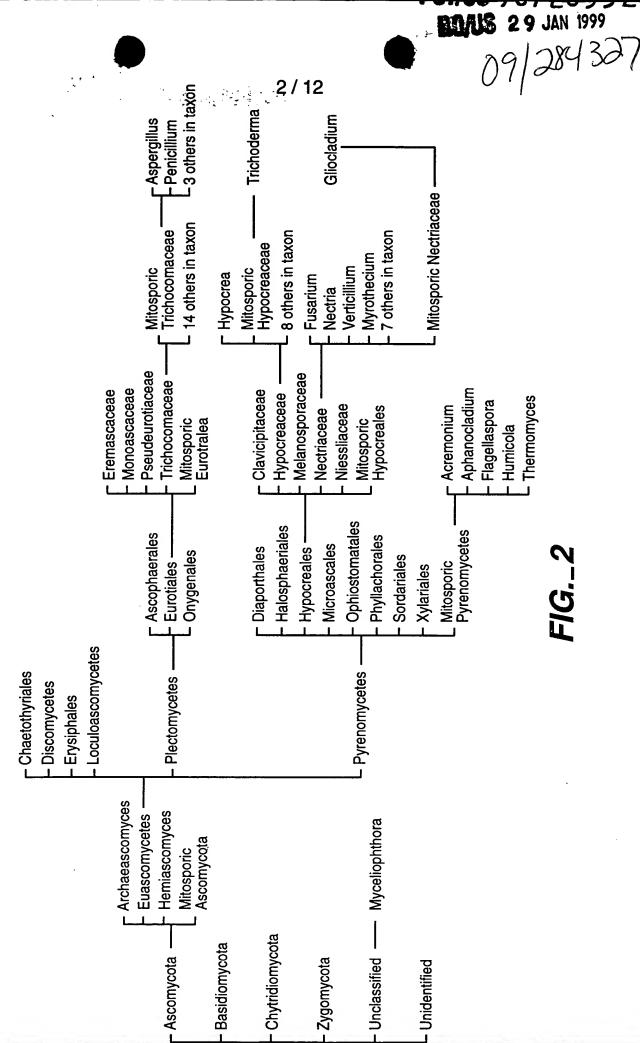
100 PCT/US 98/26552 09/ 284327

Amino Acid Sequence of EGIII

MKFLQVLPALIPAALAQTSCDQWATFTGNGYTVSNNLWGASAGSGFGCVTAVSLSGGAHADW QWSGGQNNVKSYQNSQIAIPQKRTVNSISSMPTTASWSYSGSNIRANVAYDLFTAANPNHVT YSGDYELMIWLGKYGDIGPIGSSQGTVNVGGQSWTLYYGYNGAMQVYSFVAQTNTTNYSGDV KNFFNYLRDNKGYNAAGQYVLSYQFGTEPFTGSGTLNVASWTASIN

FIGURE 1





	NINLWGKDSGGSQ			SWSGGEGNVKSYP	NSGLQFS	AGKK-VSSISS	_
	10	20	30	40	50 6	0 70	-)
EG3IN.PRO	NNLWGASAGS-GFG	CVTAVSLSG-G	A-SWHADW	QWSGGQNINVKSYQ	NSQLAIP	Q-KRTVNSISS	60
FUSEQIN.PRO	NNFWGKDSGT-GDQC	THVNWNNANG	A-GWDVEW	NWSGGKDNVKSYP	NSALLIG	DKKTISSITN	62
GLIOIN.PRO	NNKWGQGSGS-GSQC	CLTIDKTWDSN	W-AFHADW:	SWSGGTNNVKSYP	KRRSEFSI	RGKK-VSSIGT	61
ACRHYPO.PRO	WGPRSAESGEQC	TTNNGLSDDG	TLSWSVEW	IWVGAPSSVKSYPI	VVFVE	AEPRPLSEVSS	59
ASPKAWA1.PRO	E-muchanter onto						
ASPACU1.PRO	NNLWGKDAGS-GSQC	TTVNSASSAG	T-SWSTKWI	WSGGENSVKSYA1	VSGLTF-1	1-KKLVSQISQ	60
HUMIN. PRO	NNLWGKDTATSGWQC	TYLDGTNNGG	I-QWSTAW	EWQGAPDNVKSYP:	(VGKQIQI	RGRK-ISDINS	62
11AG8IN.PRO	NNRWGTSATQC	:INVIGN	GFEITQAD	SSVPTNGAPKSYP:	SVYDGCHYGNC-AI	RTTLPMRISS	61
ERWCARIN. PRO	NNVWGKDEIKG	-WQQTIFYNS	PISMGWNW	iwpssthsvkayps	SLVSGWHWTAGYTE	NSGLPIQLSS	65
GLIO314.PRO	NNLWGMGSGS-GSQC	TYVDKVWAEG	V-AWHTDWS	SWSGGDNINVKSYPY	sGrelgt	KRI-VSSIKS	61
GLIO3HYP.PRO	NNLWGQDNG-SGSQC	LTVEGVTDGL	A-AWSSTWS	WSGGSSSVKSY <i>S</i> I	IAVLSAEA	ARISAISS	60
HGRIS.PRO	NNLWGQDTATSGWQC	TYLDGTNNGG.	I-QWSTAWE	WQGAPDNVKSYPY	VGKQIQF	GRK-ISDINS	62
RHMARIN.PRO	NNVWGAETAQC	IEVGLETG	NETITRADE	IDNGNNVAAYPA	IYFGCHWAPARAI	.RDCAARAGAV	62
SLIVIN.PRO PENNOT.PRO	NNRWGSTAPQC	VI'A'I'D'I(JFRV1QADG	SAPINGAPKSYPS	VFNGCHYTNC-SP	GTDLPVRLDT	61
PHANHYPO.PRO	WGKDSGS-GSQC	ASVNS1SDSG\	V-SWSTTWN	WSGGEDNVKSYPN	ISGLVALK	-KQPVSDISS	58
F42HYPO.PRO	WGKDSG-TGSQC	L'IVDGISSGLI	_~KWSATWS	WSGGPYNVKSYPN	AVLQAPA	ARASAISS	
EMDESHYP.PRO	SQC	TTFESLSGNT	L-VWNTKWS	WSGGQGQVKSFAN	AALQFTP	KKLSSVKS	49
MYCINS.PRO	NNLWGXDNADSGSQC				AAYQFTS 		
CHBRAS. PRO	NNFWGQSRATSGSQC						1
CIBICAD.FIG	MMF WGQSKATSGSQC	LIPDSSSNSGI	r-uwuriwi	WEGGEGEVKSIAI	SGRQVST	GLT-1ASIDS	62
	IPSSASWV-YSGTDI						
	80	90	100	110			
EG3IN.PRO	MPTTASWS-YSGSNI	RA-NVAYDL-	FTAANPNH	TYSGDYELMIW			102
FUSEQIN.PRO	MQSTAEWK-YSGDNI	RA-DVAYDL-	FTAADPNHI	ETSSGEYELMIW	•		104
GLIOIN.PRO	INGGADWD-YSGSNI	RA-NVAYGI-	FTSADPNH	TSSGDYELMIW			103
ACRHYPO.PRO	IQAEWAWTYSGAGDF	TT-NVAFDI-	FTGETAD				89
ASPKAWA1.PRO	IPTSVTWS-QDDTNV	QA-DVSYDL-1	FTAANADH	ATSSGDYELMIW			102
ASPACU1.PRO	IPTTARWS-YDNTGI						102
HUMIN. PRO	MRTSVSWT-YDRTDI						104
11AG8IN.PRO	IGSAPSSVSYRYTGN						104
ERWCARIN. PRO	NKSITSNVTYSIKAT			· · · · · · · · · · · · · · · · · · ·			110
GLIO314.PRO	ISSGADWD-YTGSNL						103
GLIO3HYP.PRO	IPSKWEWRSYTGTDI						100
HGRIS.PRO RHMARIN.PRO	MRTSVSWT-YDRTDI						104
	RRAHELDVT-PI-TT						105
SLIVIN.PRO PENNOT.PRO	VSAAPSSISYGFVDG						104
PHANHYPO.PRO	IPSSVKWN-YDNTDI			ITSSGDYE			96
F42HYPO.PRO	IPSKWQWESYTGSNV			אנו אדע			87
EMDESHYP.PRO	IDSTWKWKSYSGSNI IPTSWKWO-YSTTDI						84
MYCINS PRO	1P1SWKWQ-1S11D1						100
CHBRAS.PRO	MQTSVSWE-YNTTDI						27
Jimium. Filo	TATE A SAME - TIMITIDIT	ÃΨ-MANTDT_I	TABUPURE	TATELLE I CLOSOS IN			104

CUI.PRO
SIN.PRO
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Percent Similarity

FIGURE 4

ROJUS 29 JAN 1999 09/284327

5/12 GLIO3HYP.PRO GLI0314.PRO **IGRIS.PRO**

ERWCARIN.PRO

11AGBIN.PRO

18 3

14.6 16.1 14.3 20.0 22.2

24.0 66.3

19.4 21.0 21.2

19.2 24.0

21.2

48.5

52.5

54.5 | 50.5 | 56.3 | 60.5 | 75.0 77.7 76.3 80.0 73.5 71.0 73.7 78.6

36.6 41.2 46.5 61.9 44.6 | 51.0 | 53.5 | 63.1

71.0

72.8

77.2

45.6 34.0 98.1 19.2 14.4 49.0 35.6 28.6 41.0 74.1 61.5

40.0 44.7 17.5 14.6 55.2 41.4 34.5 37.0 85.2 49.5

22.3 19.0 17.3 23.8 21.2 20.8 16.1 16.7 20.0 37.0 22.1

33.0

50.0 44.4

45.2

72.4

16.0 | 41.7

16.0

34.0

53.1

71.9

70.3

54.5

72.0 68.3

42.6 | 43.7 | 31.1 | 68.2 | 46.5 | 45.5 | 52.4

58.8

53.1 55.1

55.2 55.4 73.1

PERCENT DIVERGENCE

77.6 71.4 73.7

70.4 33.3

34.5 12.6

14.0 28.6 42.0

10.7

11.5 14.4 47.9

21.2

73.4

6.97

53.4 54.5 72.3

71.0 75.8

6:

50.5 55.2 47.9

52.4 56.3 60.5 53.5

72.0

80.4 81.9 76.3 81.2 81.5 80.4 74.2 33.7 73.1 77.4 76.9 74.2

75.8 74.5 79.7 80.6 77.4 72.3 67.0 69.5

د

4

13.5 | 13.8 | 14.3 | 15.0 | 22.2

ASPKAWA1.PRO

ASPACU1.PRO

HUMIN.PRO

ACRHYPO.PRO

22.2 29.2

28.6 33.7

33.3

22.5 51.0 38.0 39.2 11.8 12.7 59.4 41.4

12.7

40.2

46.1

34.3

16.7 24.5 52.0 46.0 44.1 13.7 15.7

31.5 | 18.0 | 20.2 | 22.5 | 34.8 | 31.5 | 12.4 | 16.9 | 28.1

36.9 40.0 81.5 49.0

85.2 47.1

69.8 44.8 41.7 47.0

GLIOIN.PRO

FUSEQIN.PRO

34.5 34.0 88.9 42.3

15.5 22.3 68.9 38.0 41.7 16.5 12.6 50.0 40.2 34.5 33.0 85.2 44.7

54.4 37.0 41.3 15.4 13.5 55.2 40.2

50.0 39.1 36.9 36.0 88.9 46.1

14.7

42.2 16.7

17.6 18.6 55.9 37.0

56.9 43.1

27.0 49.0

52.9 48.5

51.0

22.5 47.1 42.2 25.8

9

S

4

55.9 43.3 15.4 21.2

41.7

49.0 31.5 65.7

21.3

42.6 48.5

£3.

2

66.3 70.6

66.7

S

0

16

20

EG3IN.PRO

ESHYP.PRO NHYPO.PRO RHMARIN.PRO YPO.PRO INS.PRO PENNOT.PRO AS.PRO SLIVIN.PRO ل ئ 47.1 35.7 40.6 74.1 50.0 15 15.4

									}	DEDCENIT CIMII ADITY	CIMI	FIVE										
		20	19	18	16 17	16	14 15	14	10 11 12 13	12	11	10	6	8	7	9	5	4	. 3	2	1	
CHBR	20		18.5	48.5	61.4	1.5 38.5 71.0 73.7 48.5 57.6 38.5 75.5 74.2 48.4 62.8 61.4 48.5 18.5	48.4	74.2	75.5	38.5	9'29	48.5	73.7	71.0	38.5	49.5	45.5	53.4 61.6 45.5 49	53.4	52.4	50.5 52.4	20
MYCIN	19	81.5		41.7	57.9	.8 25.9 68.0 51.9 14.8 37.5 29.6 55.6 72.0 13.0 35.7 57.9 41.7	13.0	72.0	55.6	29.6	37.5	14.8	51.9	68.0	25.9	14	18.5	57.1	14.8 57.1	11.1	11.1	19
EMDE	18	44.4 46.0	44.4		40.2	45.8 53.5 75.3 69.1 56.1 42.9 52.5 77.5 78.7 48.9 51.8 40.2	48.9	78.7	77.5	52.5	42.9	56.1	69.1	75.3	53.5	45.8	51.0	58.2 59.5 51.0	58.2	56.1	51.0	18
F42HY	17	35.7	56.0 25.9 35.7	56.0		54.4	58.5	83.3	87.2	68.7	56.0	59.0	81.9	80.8	68.7	55.6	59.3	67.5	56.6 61.4 67.5 59.3	9.99	55.6	17
PHAN	16	31.0	33.3	41.4	44.0		44.0	79.5 83.5 44.0	79.5	58.1	1.6 57.0 74.7 74.7 51.8 27.6 58.1	51.8	74.7	74.7	57.0	2	2 55.4	61.2	54.1	54.1	54.2	16
PENN	15	47.1 35.7 40.6 74.1 50.0	74.1	40.6	35.7	47.1		84.9	74 48.4 76.7 73.9 45.3 47.8 49.5 81.6 84.9	49.5	47.8	45.3	73.9	7.97	48.4	27	37.9	60.0	48.4	41.7	46.3 41.7 48.4 60.0 37.9	15
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FIGURE 6

	<u>FIGURE 6</u>	<u> </u>
* *		•
	. 1	60
Treese	i, MKF.LOVLPALIPAALAOTS	CDOMAGENCAIC VIIII
Hschweinitzi	* M. · · · · · · · · · · · · · · · · · ·	CDOVATECOMO VIII
Aaculeatus	M·····································	TATION VINOUNATION VINT
Akawachii	MKLSMT.LSLFAATAMGQT.	MOCOVERY GERE
Akawachii	M. KAPHI, LANI CONNUNCONO	MCSQIDSASSPPYSV
Aoryzae		LCDQYATYTGGVYTI
Hgrise	MKLSLA.LATLVATAFSQE	LCAQYDSASSPPYSV
	L M LKSALLLGAAAVSVOSASIPTIPANTEPROTR S	TOPT.VOVECNO VET
Hinsolens	MLKSALLLGPAAVSVOSASIPTIPANT.FPROTR Q	TOPT VOVECNO VET
Chaetomium_brasiliens	* M AATPLOWREROOOVS	TOCOCCUICONO VOI
Fequset:	MKSTLLLAGAFAPLAFAKD	LODOVOVI CODO VOI
Fjavanicum_:	. MKSALVA.ALAGLAAASPTRI.TPRGO	ECCOMPORMACE AME
Fjavanicum_2	MKFFGVVSASLAATAVATPTTPTETIEKRDTT	TCGQWDSEIAGAITI
Groseum	MKANIVILSLFAPLAAVAQT	WCDAFGSLATSGYTV
Groseum	M VCTTCEECT AMILYA A DGCAMDDDON	LCGQYSSNTQGGYIF
Groseum3		LCGQWDSVETGGYTI
		LCGQYQSQSQGGYIF
	M KIGIAYLAAVLPLA MAES	LCDOVAVICEDES VATE
Memnoniella_echinata	MKVAAL.LVALSPLAF.AOS	LCDOVCVVCCNC VED
Emericella_desertoru	M·····································	FCCOUNTY DATE TO THE
Actinomycete_11AG8	MRSHPRSATM.TVLVVLASLGALLTAAAPAQANQQ	TODDYOMMIAD DIAM
Slividans CelB	MRTLRPQARAPRGLLAALGAVLAAFALVSSLVTAAAPAQADTT	CDRIGITIOD.RIVV
Rhodothermus_marinus_	MNIME AND ACTION DESCRIPTION OF THE PROPERTY O	ICEPFGTTIQG.RYVV
Erwinia_carot	MNVMR AVLVLSLLLLFGCDWL.FPDGDNGKEPEPEPEPTVEI	LCGRWDARDVAGGRYRV
DIWINIA_Caroc	MQTVNTQPHRIFRVLLPAVFSSLLLSSLTVSAASSSNDADKLY	FGNNKYYL
		· -
	61	120
Treesei	SNNLWGASAGSGFGCV.TAVSLSGG.ASWHADWQWSGGQNNV	TYCYONC
Hschweinitzii	SNNLWGASAGSGFGCV.TSVSLNGA.ASWHADWQWSGGQNNV	MCAUM
Aaculeatus_	NNNLWGKDAGSGSQCTTVNSASSAG.TSWSTKWNWSGGENSV	MOTONA
Akawachii_	NONLWGEVOCTO SOCUVUDUI GOGO AGUITATION	KSIANS
Akawachii 2	NQNLWGEYQGTGSQCVYVDKLSSSG.ASWHTKWTWSGGEGTV	KSYSNS
	NNNLWGKDAGSGSQCTTVNSASSAG.TSWSTKWNWSGGENSV	KSYANS
Aoryzae	NNNLWGQDSGTGFTSOCVYVDNLSSSG. AAWHTTWTWNCCFCGU	KCVCNC -
Hgrisei	LANNLWGKDTATS.GWOCTYLDGTNNGG TOWNTAWFWOCA PONT	עאַעסעזאַ
Hinsolens	LINDWGKDTATS.GWQCTYLDGTNNGG.IOWSTAWEWOGAPDNN	KCADAN
Chaetomium_brasiliense	NNNLWGQSRATS.GSQCTYLDSSSNSG.IHWHTTWTWEGGEGEV	KGAYAG
Fequseti	NNNVWGKDSGTGDQCTHVNWNNANG.AGWDVEWNWSGGKDNV	VCVDNC
Fjavanicum_1	YNNLWGKDNAES.GEQCTTNSGEQSDGSIAWSVEWSWTGGQGQV	KOYPY
Fjavanicum_2	AHMMCKCDyde CCOCMBEMCROphystar ramer and Cocombemcrophysia	KSYPNA
Groseum1	YHNNWGKGDATS.GSQCTTFTSVSNNNFV.WSTSWTWAGGAGKV	KSYSNV
	NNNMWGMGSGSGSQCTYVDKVWAEG.VAWHTDWSWSGGDNNV	KSYPYS
	INNLWGQDNG.S.GSQCLTVEGV.TDGLAAWSSTWSWSGGSSSV	KCVCNIA
Groseum3	NNNKWGQGSGSGSOCLTIDKTWDSN.VAFHADWSWSCGTNNN	KCVDNIA
Groseum4	NNNEWGAATGTGDOCTYVDSTSSGG.VSWHSDWTWSGSFSFT	KGADAG
Memnoniella_echinata	NNNMWGRNSGQGNQCTYVDYSSPNG.VGWRVNWNWSGGDNNV	KCADAC
Emericella_desertoru	YNNLWGQDNADS.GSQTGVDSANGNSISWHTTWSWSGGSSSV	ROIPID
Actinomycete_11AG8	QNNRWGTSATQCINVTGNGFEITQADGSVPTNGAP	KSIANA
Slividans_CelB	OMNIPWOCEND OCUMNI DEGENERAL DEGENERAL	KSYPSVYDGCHYG
Rhodothermus_marinus_	QNNRWGSTAPQCVTATDTGFRVTQADGSAPTNGAP	KSYPSVFNGCHYT
	INNVWGAETAQCIEVGLETGNFTITRADHDNGNNVA.	.AYPAIYFGCHWAPAR
Erwinia_carot	FNNVWGKDEIKGWQQTIFYNSPISMGWNWHWPSSTHSVI	KAYPSLVSGWHWTAG.
	121	180
Treesei	.QIAIP.QKRTVNSISSMPTTASWSYSGSNIRANVAYDL.FT	LY V VIDVITALISM A V V V V V V V V V V V V V V V V V V
Hschweinitzii	.QINIP.QKRTVNSIGSMPTTASWSYSGSDIRANVAYDL.FT	DA ANDAR WILLSON E.
Aaculeatus	GIAL MKKINCOLOUIDIADM C ADMINISTRATION CO.	MANPHHVTYSGDYEL
Akawachii	GLTF .NKKLVSQISQIPTTARW.SYDNTGIRADVAYDL.FT	TAADINHVTWSGDYEL
Akawachii_2	.GLTFDKKLVSDVSSIPTSVTW.SQDDTNVQADVSYDL.FT	TAANADHATSSGDYEL
	.GLSFNKKLVSQISHIPTAARW.SYDNTCIRRGRAYDI, FT	TAADTNIHUTWCCDVET
Aoryzae	- AVTE - UKKLYSDVOSIPTDVEW SODFTNTNINADIJAVNI, PI	A DOMESTING OF A L
Hgrisei	GKUTURGRK.ISDINSMRTSVSW TVDPTDI DANTIA VDU PR	ADDDDIEDE GOODIES
Hinsolens	GAQIQAGAA.ISDINSMRTSVSWTYDRTDTRAMVAYDV pa	ADDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Chaetomium_brasiliense	GROVSIGLI IASIDSMOTSVSW. EYNTTDTOANVAVDT FT	A EUDURERGGGUART
Fequseti	.ALLIGEDKKTISSITNMQSTAEWKYSGDNLRADVAYDL.FT	ALDEDIENSSSDIEL
Fjavanicum_1	.VVEIEKKTLGEVSSIPSAW.DWTYTGNGIIANVAYDL.FT	MADENNETSSGEYEL
Fjavanicum_2	ALEK INKKISDIKCUCOD to TEDUNGHIANVAYDL.FT	SSTESGDAEYEF
Groseum1	.ALEKINKKISDIKSVSTRW. IWRYTGTKMIANVSYDL .WF	APTASSNNAYEI
	.GRELGT.KRIVSSIKSISSGADWDYTGSNLRANAAYDI.FT	'SANPNHATSSGDYEV
Groseum2	. VLSA. EAARISAISSIPSK. W. EWSYTGTDTVANVAVDI. FO	MUDCCOURD EVER
Groseum3	-GUEFSK.GKKVSSIGTINGGADWDYSGSNTRANNAVGT FT	C & DDXIUT IMCCCDVDT
Groseum4	-GLULPE.KKIVTSIGSISTGAEWSYSGSDTRADVAVDT FT	A A DDNIU A TICCO DV DV
Memnoniella_echinata	GRULPI KRIVSWIGSLPTTVSWNYOGNNI RANDAVDI. ET	AANDNIUDNICCODVET
Emericella_desertoru	AIQT. ISTKLNSLSSIPTS. W. KWOVSTTDIVANNAVDI FT	CCCACCDC DVDT
Actinomycete_11AG8	NCAPRTTLPMRISSIGSAPSSVSYRYTGNGVY.NAAYDIWLD	DEDDENOUND
Slividans CelB	NCSPGTDLPVRLDTVSAAPSSISYGFVDGAVY.NASYDIWLD	FIFRINGVNKTEI
Rhodothermus_marinus_	ATROCA ADACATODA UPT DIMID	PTARTDGVNQTEI
Erwinia_carot	AIRDCAARAGAVRRAHELDVTPITTGRW.NAAYDIWFS	PVTNSGNGYSGGAEL
DIWINIA_COLOC	YTENSGLPIQLSSNKSITSNVTYSIKATGTY.NAAYDIWFH	TTDKANWDSSPTDEL
		-
	181	240
Treesei	MIWLGKYGDIGPIGSSQGTVNVGGQSWTLYYGYNGAMQV	VCEUXOM NIMM
nscnweinitzii	MIWLGKYGDIGPIGSSQGTVNVGGQTWTLYYGYNGAMQV	VCPUACE NOT
	MIWLARYGGVQPIGSQIATATVDGQTWELWYGANG:	ISF VAQS . NTT
Akawachii	MIWIARYGSVOPICKO TAMAMUOGUGUGUGU	SUKTYSEVAPT PIT
Akawachii 2	MIWLARYGSVQPIGKQIATATVGGKSWEVWYGTSTQAGAI	EQKTYSFVAGS.PIN
ANawaUIIII_Z	MIWLARYGGVQPLGSQIATATVEGQTWELWYGVNG	AQKTYSFVAAN.PIT



Aory	MIWLARYGTIQPIGTQIDTATVEGHTWEL GTTIQAGAEQKTYSFVSAT.PI
H.	
Hinso.	MIWLARYGGIYPIGTFHSQVNLAGRTWDI
Chackenium ibass it is	MIWLARYGGIYPIGTFHSQVNLAGRTWDLW MGNMRVYSFLPPSGDI
Chaetomium brasiliens	MIWLARYNNVSPIGSSVATATVGGDTWDLFAGANGDMEVYSFVAENT.M
Fequset:	L MVWLARIGGVQPIGSLOTSVTIEGHTWELWVGMNGSMKVFSFVADT DV
Fjavanicum_	MIWLSALGGAGPISNDGSP.VATAELAGTSWKLYQGKNNQMTVFSFVAESDV.
Fjavanicum_	MIWVGAYGGALPISTPGKGVIDRPTLAGIPWDVYKGPNGDVTVISFVASSNQ.
Groseum	
Groseum	
Groseum	MIWLGKLGDIYPIGNSIGRVEAANREWDFLVGYNGAMKV FSFVADS DIM
Groseum	MTWIANICCLTPICCD TOTAL ACDITION INDOVICEMENT MATERIAL ACTIONS
Memnoniella_echinata	MIWLGRLGNVYPIGNQVATVNIAGQQWNLYYGYNGAMQVYSFVSPN.QL
Emericella_desertor	MINI AND COLOR OF THE COLOR OF
Actinometer 110	MIWLAALGGAGPISSTGSS.IATVTLGGVTWSLYSGPNGSMQVYSFVASSTT.
Actinomycete_11AG8	MIWFNRVGPVQPIGSPVGTAHVGGRSWEVWTGSNGSNDVISFLAPSA.IS
Slividans_CelB	MIWFNRVGPIQPIGSPVGTASVGGRTWEVWSGGNGSNDVI. SEVADGA TO
Rhodothermus_marinus	MIWLNWNGGVMPGGSRVATVELAGATWEVWYADWDWNYIAYRRTTPT.TS
Erwinia_carot	MIWLNDTNAGPAGDYIETVFLGDSSWNVFKGWINADN.GGGWNVFSFVHTSGTNS
	HIWE DIA GFAGDITETVF DGDSSWNVF KGWINADN. GGGWNVFSFVHTSGTNS
	241 300
Treesei	NYSGDVKNFFNYLRDNKGYNAAGQYVLSYQFGTEPFTGSGT.LNVASWTASI.N
Hschweinitzii	SYSGDVKNFFNYLRDNKGYNAGGQYVLSYQFGTEPFTGSGT.LNVASWTASI.N
Aaculeatus	CEOCONAIDEEVAL MONICORN COOKET TO THE TOTAL TO THE TOTAL TOT
	SFQGDVNDFFKYLTQNHGFPASSQYLITLQFGTEPFTGGPATLSVSNWSASVQQAG
Akawachii	SWSGDIKDFFNYLTQNQGFPASSQHLITLQCGTEPFTGGPATFTVDNWTASVN
Akawachii_2	SPQGD1NDFFKYLTONHGFPASSOYLIILALOFGTEPF TGCDATLATIADWCAGUO
Aoryzae	TFGGDIKKFFDYITSKHSFPASAQYLINMQFGTEPFFTTGGPVTFTVPNWTASVN
Hgrisei	DFSCDIKDFFNYLERNHGYPAREQNLIVYQVGTECFTGGPARFTCRDFRADL
Hinsolens	DECODING PRINCIPLE CONTROL OF THE CO
	DFSCDIKDFFNYLERNHGYPAREQNLIVYQVGTECFTGGPARFTCRDFRADL
Chaetomium_brasiliense	SFSGDVKDFFDYLEQNVGFPVDDOYLLVFELGSEAFTCGPATLSVSOFSANT
Fequseti	NFNADIKQFWDYLTKSONFPADNOYL LTFOFGTEPF TGDNAKFTUTNENAUTV
Fjavanicum 1	NFCGDLADFTDYLVDNHGVSSSQILQSVGAGTEPFEGTNAVFTTNNYHADVE
Fjavanicum_2	NEO A DI VEEL NVI MCVOOL DONE
	NFQADLKEFLNYLTSKQGLPSNYVATSFQAGTEPFEGTNAVLKTSAYTISVN
Groseum1	SFDGEIMDFFYVVKDMRGFPADSQHLLTVQFGTEPISGSGAKFSVSHWSAKLG
Groseum2	SFSGDLNDFIQYLVDSQGYSGSOCLYSIGAGTEPF TGTDAFFTTTGVSVSVSACD
Groseum3	LFDGNIMDFFYVMRDMQGYPMDKQYLLSLQFGTEPFTGSNANFSCWYFGAKIK
Groseum4	SFDGEIMDFFYVVKDMRGFPADSQHLLTVQFGTEPISGSGAKFSVSHWSAKLG
Memnoniella_echinata	VECCHINETTIVE CONTROL FADSQUE. LIVOFGTEPI SGSGAKFSVSHWSAKLG
	YFSGNVKDFFTYLQYNRAYPADSQYLITYQFGTEPFTGQNAVFTVSNWSAQQNN
Emericella_desertoru	SFSADLMDFINYLAENOGLSSSOYLTHVOAGTEPF TCTDATITUSGVGVGVG
Actinomycete_11AG8	SWSFDVKDFVD.QAVSHGLATPDWYLTSIQAGFEPWEGGTGLAVNSFSSAVNAG.
Slividans_CelB	GWSFDVMDFVR.ATVARGLAENDWYLTSVQAGFEPWQNGAGLAVNSFSSTVETGT
Rhodothermus_marinus	VSFI DI VA FID DAVA BOVID DE MILL AND THE CONTROL OF THE CONTROL O
Erwinia_carot	VSELDLKAFID.DAVARGYIRPEWYLHAVETGFELWEGGAGLRTADFSVTVQ
EI WIII a_Caloc	A. SLNIRHFTDYLVQTKQWMSDEKYISSVEFGTEIFGGDGQIDITEWRVDVK
	301
Treesei	300
Hschweinitzii	
Aaculeatus	F EPWONGAGLAVNSF
Akawachii	*************
Akawachii_2	***************************************
Aoryzae	***************************************
Hgrisei	
Hinsolens	W
Chaetomium_brasiliense	Δ
Fequseti	
Fjavanicum_1	***************************************
Fjavanicum_2	
^	
Groseum1	
Groseum2	SGCDETTTSSQAQSSTVETSTATQPQSSSTVVPTVTLS.QPSNESTTTPVQSQ
Groseum3	
Groseum 4	***************************************
Memnoniella_echinata	
Emericella_desertoru	***************************************
Actinomycete_11AG8	GGNGGTPGTPAACQVSYSTHTWPGGFTVDTTITNTGSTPVDGWELDFTLPACHTVPCA
Slividans CelB	PGGTDPGDPGGPSACAVSYGTNVWQDGFTADVTVTNTGTAPVDGWQLAFTLPSGQRITNA
Rhodothermus_marinus_	The state of the s
Erwinia_carot	
BIWIIIIa_caroc	
	361
419	
Treesei	
Hschweinitzii	
Aaculeatus	SSTV
Akawachii	***************************************
Akawachii_2	***************************************
Aoryzae	//////////////////////////////////////
	•••••
Hgrisei	***************************************
Hinsolens	***************************************
Chaetomium_brasiliense	***************************************
Fequseti	
Fjavanicum_1	
	У
Fjavanicum_2	***********
Groseum1	*******************************
Groseum2	PSSVETTPTAQPQSSSVQTTTTAQAQPTSGTGCSRRRKRRAVV
Groseum3	



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WNALISPASGAVTARSTGSNGRIAANGGTQSFGFQGTSSGTGFNAPAGGRLNGTSCTVR
WNASLTPSSGSVTATGASHNARIAP.GGSLSFGFQGTYGGA.FAEPTGFRLNGTACTTV

Fig 6 (Continued)